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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,135	08/26/2003	Hiromichi Mizukami	KON-1816	3254

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LUCAS & MERCANTI, LLP  
475 PARK AVENUE SOUTH  
15TH FLOOR  
NEW YORK, NY 10016

EXAMINER
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KHAN, USMAN A

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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09/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/648,135

Applicant(s)

MIZUKAMI ET AL.

Examiner

Usman Khan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 9-12 and 15-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 8, 13, 14 and 23-42 is/are rejected.
- 7) ☒ Claim(s) 19-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

Applicant's election of species 1 in the reply filed on 6/19/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Also, noted Claims 3 – 6, 9 – 12, and 15 – 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species 2 – 5.

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7, 8, 13, 14, 34 – 36, and 40 - 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagao (US patent No. 6,055,340).

Regarding **claim 1**, Nagao teaches an image forming method comprising: applying an image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device (figures 1, 5, 9, and 10; smooth, sharpened, and blur corrected image is outputted after being processed); wherein a process of the image processing comprises: a scene-referred image data generation process for generating scene-referred image data on the basis of the captured-image data (figure 9; processing path going through the smoothing path); and a viewing image referred image data generation process for generating viewing image referred image data on the basis of the generated scene-referred image data (figure 9; processing path going through the sharpening path); wherein, the image processing comprises: a smoothing processing and a sharpening processing device (figures 1, 5, 9, and 10; smoothing and sharpening).

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Nagao teaches all of the limitations of the parent claim. Additionally, Uchino et al. teaches that the smoothing processing is practiced in the scene-referred image data generation process (figure 9; processing path going through the smoothing path) and the sharpening processing is practiced in the viewing image referred image data generation process (figure 9; processing path going through the sharpening path).

Regarding **claim 7**, Nagao teaches an image processing apparatus which applies image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device (figures 1, 5, 9, and 10; smooth, sharpened, and blur corrected image is outputted after being processed) comprising: a scene-referred image data generation section for generating scene-referred image data on the basis of the captured-image data (figure 9; processing path going through the smoothing path); a viewing image referred image data generation section for applying an image processing for optimizing the scene-referred image data to generate viewing image referred image data (figure 9; processing path going through the sharpening path); a smoothing processing section for applying a smoothing processing; and a sharpening processing section for applying a sharpening processing (figures 1, 5, 9, and 10; smoothing and sharpening).

Regarding **claim 8**, as mentioned above in the discussion of claim 7, Nagao teaches all of the limitations of the parent claim. Additionally, Uchino et al. teaches that the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the captured-image data (figure 9; processing path going through the smoothing path), and the viewing image referred image data generation section includes the sharpening processing section for applying a sharpening processing to the scene-referred image data (figure 9; processing path going through the sharpening path).

Regarding **claim 13**, Nagao teaches an image recording apparatus which applies image processing for forming an optimum viewing image on an output medium to captured-image data outputted from an image-capturing device, and outputs the optimum viewing image on the output medium (figures 1, 5, 9, and 10; smooth, sharpened, and blur corrected image is outputted after being processed) comprising: a scene-referred image data generation section for generating scene-referred image data on the basis of the captured-image data (figure 9; processing path going through the smoothing path); a viewing image referred image data generation section for applying an image processing for optimizing the scene-referred image data to generate viewing image referred image data (figure 9; processing path going through the sharpening path); a smoothing processing section for applying a smoothing processing; and a sharpening processing section for applying a sharpening processing (figures 1, 5, 9, and 10; smoothing and sharpening).

Regarding **claim 14**, as mentioned above in the discussion of claim 13, Nagao teaches all of the limitations of the parent claim. Additionally, Uchino et al. teaches that the scene-referred image data generation section includes the smoothing processing section for applying a smoothing processing to the captured-image data (figure 9; processing path going through the smoothing path), and the viewing image referred image data generation section includes the sharpening processing section for applying

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a sharpening processing to the scene-referred image data (figure 9; processing path going through the sharpening path).

Regarding **claims 34 - 36**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims. Additionally, Uchino et al. teaches that the captured-image data outputted from the image-capturing device are the scene-referred image data (figure 9; processing path going through the smoothing path).

Regarding **claims 40 - 42**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims. Additionally, Uchino et al. teaches that the captured-image data outputted from the image-capturing device are the viewing image referred image data (figure 9; processing path going through the smoothing path).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22 - 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao (US patent No. 6,055,340) in further view of Keyes et al. (US patent No. 6,091,861).

Regarding **claims 22 - 24**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims.

However, Nagao fails to teach that an amount of application of the sharpening processing is adjusted in accordance with a kind of the output medium.

More specifically, Keyes et al. teaches that an amount of application of the sharpening processing is adjusted in accordance with a kind of the output medium (Abstract, column 3 line 45 – column 4 line 7 i.e. type of media).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Keyes et al. with the teachings of Nagao because in column 4 lines 35 – 42 Keyes et al. teaches that the invention allows for one sharpening level to be assigned to each image to simplify the sharpening operation, relative to the prior art, and to make the sharpening calculation more efficient and practical to use in photofinishing applications.

Regarding **claims 25 - 27**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims.

However, Nagao fails to teach that an amount of application of the sharpening processing is adjusted in accordance with a size of the output medium.

More specifically, Keyes et al. teaches that an amount of application of the sharpening processing is adjusted in accordance with a size of the output medium (Abstract, column 3 line 45 – column 4 line 7; image size is adjusted by media type which will be based on size).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Keyes et al. with the teachings of Nagao because in column 4 lines 35 – 42 Keyes et al. teaches that the invention allows for one sharpening level to be assigned to each image to simplify the sharpening operation, relative to the prior art, and to make the sharpening calculation more efficient and practical to use in photofinishing applications.

Claims 28 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao (US patent No. 6,055,340) in further view of Lee et al. (US patent No. 5,627,908).

Regarding **claims 28 - 30**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims.

However, Nagao fails to teach that an amount of application of the sharpening processing is adjusted in accordance with the size of a main photographic object.

More specifically, Lee et al. teaches that an amount of application of the sharpening processing is adjusted in accordance with the size of a main photographic object (column 15 lines 37 – 59 and column 19 lines 6 – 29 size of object).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lee et al. with the teachings of Nagao to have a proper amount of sharpening for sized shape, and location based subjects.

Regarding **claims 31 - 33**, as mentioned above in the discussion of claim 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims.

However, Nagao fails to teach that an amount of application of the sharpening processing is adjusted in accordance with a photographed scene.

More specifically, Lee et al. teaches that an amount of application of the sharpening processing is adjusted in accordance with a photographed scene (column 15 lines 37 – 59 and column 19 lines 6 – 29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lee et al. with the teachings of Nagao to have a proper amount of sharpening for sized shape, and location based subjects.

Claims 37 - 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao (US patent No. 6,055,340) in further view of Examiners Official Notice.

Regarding **claims 37 - 39**, as mentioned above in the discussion of claims 1, 7, and 13 respectively, Nagao teaches all of the limitations of the parent claims.

Additionally, Nagao teaches that the captured-image data outputted from the image-capturing device are scene-referred data,

However, Nagao fails to teach that the scene-referred data is RAW data.

The examiner takes Official Notice that it is old and well known in the art to have RAW images outputted and saved in memory.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use RAW data since RAW image data is easier to manipulate and edit later in processing.

### ***Allowable Subject Matter***

**Claims 19 - 21** are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent forms including all of the limitations of the base claims and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter for **claims 19 - 21**: "the smoothing processing is carried out by means of a filter to change mask sizes, mask shapes, and threshold values, on the basis of the noise characteristic of image data" is not discussed or suggested in any of the prior art that was searched.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al. (US patent No. 7,145,694) shape and size of mask are determined when smoothing.

Nagao (US patent No. 6,628,842) size of mask are determined when smoothing.

Maurer et al. (US patent No. 6,731,821) teaches smoothing and sharpening.

Maurer (US patent No. 6,665,448) teaches smoothing and sharpening.

Maurer et al. (US patent No. 6,731,821) teaches smoothing and sharpening.

Chan (US patent No. 6,665,447) teaches smoothing and sharpening.

Metcalf et al. (US patent No. 6,094,511) teaches smoothing and sharpening.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan  
09/01/2007  
Patent Examiner  
Art Unit 2622



DAVID OMETZ  
SUPERVISORY PATENT EXAMINER